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Effects of Inventory Management System on Organizational Performance: Case Study of Grain Bulk Handlers Limited

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Abstract

This study sought to critically analyze Inventory Management System as a determinant for performance of Grain Bulk. It sought to establish effects of inventory management system on organizational performance. Specifically it evaluated effects of inventory; control, speed, cost and accountability on organization performance. Having not yet adopted inventory management systems, organizations face stock out cost, which results into great loss. This study developed research questions such as what are the effects of inventory; control, speed, cost and accountability on organization performance. The study adopted a descriptive research design which ascertained and described characteristics of the variable of interest in a situation. The target population for this study was 672 workers with a size sample of 100.

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The study used semi-structured questionnaires with both closed and open end. The filled-in and returned questionnaires were coded and entered into a Statistical Package for Social Sciences version 22.0. Descriptive statistics such as means, standard deviations as well as regressions analysis was done to establish relationships between the variables of the study and organizational performance. The findings revealed that inventory management system is positively related and is significant for organizational performance in Grain Bulk. Three of the four attributes of inventory management system were found to be positively related to organizational performance. The researcher thus recommended that inventory management should be held strategically to boost organizational performance in Grain Bulk Handlers LTD.

Keywords: Inventory accountability; Inventory Control; Inventory management system; Organizational Performance; Stock out Cost

1. Introduction

1.1 Background information

Inventory managers are concerned with cost, criticality and contribution of their holdings. Ordering and maintaining inventory has several costs. These include capital costs, administrative expenses, storage charges, shrinkage, taxes and insurance. Most of these vary directly with the average quantity of inventory held. An obvious strategy for cost avoidance would be to reduce or eliminate inventories. That probably cannot be done in very many cases. Most Firms in USA, West and Eastern Europe determine the level of inventory necessary to provide an acceptable level of customer service and manage that size inventory as efficiently as possible. According to [4] Firms uses Just in Time method of inventory management hence keep zero or very minimal inventory at all.

Customer service requirements of manufacturers and re-sellers are different; therefore their inventory maintenance policies differ. Manufacturers are primarily concerned with efficient utilization of their production facilities. They maintain raw materials inventory to prevent production line interruption due to lack of inputs. Manufacturers favour long production runs to achieve production economies of scale this is what is mostly being applied in the firms which do their manufacturing in countries like China, South Korea, Hungary and Vietnam. This results in fairly large holdings of both raw materials and finished goods at the manufacturing level.

The inventory policy of distributors and retailers is strongly influenced by the nature of the demand for their goods. Special goods consumers are willing to wait for special orders to provide exactly the product they want, therefore an extensive inventory is not required which is what is experienced locally in most African countries Kenya being included. Industrial purchasers making new-task buys are in somewhat the same situation. Consumers of convenience goods and industrial purchasers making straight re-buys have little brand or dealer loyalty.

When confronted with stock-out, these customers easily switch supplier. Distributors and retailers of convenience goods maintain extensive inventories to avoid lost sales and lost customers. When the demand schedule has been determined an economic order quantity (EOQ) model and break-even analysis, two popular analytical techniques may be used to minimize total inventory maintenance costs this being the case in most of organizations in Kenya and Grain Bulk Handlers at large. According to [22] Inventory management or control refers to a planned method of purchasing and storing the material to prevent stock out.

Organization uses inventory control to minimize idle time caused by shortage of inventory and non-availability of inventories as per requirement to keep down capital investment in inventory. According to [12] increasingly integrating financial data such as accounts receivable with sales information that includes customer histories is what most Firm do. The goal is to control inventory quarter to quarter so it doesn't come back to bite the bottom line.

Key components of an integrated system are general ledger, electronic data interchange, database connectivity and connections to a range of vertical business applications. According to [15] a company recognizes that customer satisfaction is an important key to success. Also term that the customer is always the "king" thus the organization ensures the availability of materials in the store so as to prevent any disruption during production processes.

The company recognizes that customer satisfaction in a manner that the Inventory control managers defines how often inventory levels are reviewed to determine when and how much to order. It is performed on either a perpetual or a periodic basis. Inventory manager's implements inventory policy, they use customer demand to pull product through the distribution channel and an alternative philosophy used in the organization which allocates inventory on the basis of forecasted demand of product availability.

Automation can dramatically impact all phases of inventory management, including counting and monitoring of inventory items, recording and retrieval of item storage location, recording changes to inventory and anticipating inventory needs, including inventory handling requirements.

This is true even of stand-alone systems that are not integrated with other areas of the business, but many analysts indicate that productivity and hence profitability gains that are garnered through use of automated systems can be increased even more when a business integrates its inventory control systems with other systems such as accounting and sales to better control inventory levels. According to [1]

The Company periodically places order when the company thinks a minimum level has been reached or when the inventory of a particular item is exhausted and they try at any cost to control the inventory levels. Inventory levels are kept on records so as to prevent the company incurring excessive purchasing and carrying costs on the one hand and stock out costs on the other hand.

According to [18] stand alone Warehouse Management System packages acquired to perform individual functions will soon become obsolete because they do not integrate well with other systems.

1.2 Problem statement

Most organizations have not yet adopted inventory control management tools and systems in purchasing and supply hence they are facing the challenge of stock out cost. According to [11] this simply means the non-availability of the stock. Which is serious in Grain Bulk Handlers and may result in a breakdown of production operation or delaying the operation. This stock out is multisided in the loss of machine and man-hour, the loss of service to customers, the loss of goodwill, the loss of lagging behind in competition and loss through losing profit.

The scenario becomes even more damaging especially for operating Ware houses for distribution of goods which require maximum stock of a variety of items for distribution purposes. The challenge is that of identifying the different product consumption and their span period in the Go downs. According to [8] when there is no Order and effective management of inventory system to retail outlets, they are bound to operate in a loss and facing possible liquidation due to heavy stock out cost, pilferation, obsolescence and unnecessary locking capital in stock inventory.

This study therefore sought to find out the effects of inventory management system on organizational performance.

1.3 Objectives of the study

1.3.1 General objective

The general objective of this study was to establish the effects of inventory management system on organizational performance.

1.3.2 Specific Objectives

1. To evaluate the effect of inventory control on organizational performance
2. To find out the effect of inventory speed on organizational performance
3. To establish the effect of inventory cost on the performance of an organization
4. To evaluate the effect of inventory accountability on the performance of an organization

1.4 Research questions

The researcher sought to answer the following questions.

- i. What are the effects of inventory control on organizational performance?
- ii. What are the effects of inventory speed on organizational performance?
- iii. What are the effects of inventory cost on the performance of an organization?
- iv. What are the effects of inventory accountability on organizational performance?

1.5 Justification of the Study

The study may benefit;

1.5.1 Inventory control managers who will have to define how often inventory levels are reviewed to determine when and how much to order and whether it is performed on perpetual or periodic basis

1.5.2 Inventory manager's implements in inventory policy, the use of customer demand to pull product through the distribution channel and an alternative philosophy used in the organization which allocates inventory on the basis of forecasted demand of product availability. All this requires an in depth knowledge in inventory management hence this study shades more light in it thus this study will be of great use to inventory managers

1.5.3 To Grain Bulk Handler Ltd who may wish to adopt the study, it will shade more light on how well they can manage their inventory strategically so as to maximize profit.

1.5.4 The study will also help scholars to build knowledge and find possible future research on the effects of inventory management systems.

1.6 Limitations of the study

The study was limited by funds as it was not enough to cater for transport and secretarial services. The researcher however got financial support from relatives to support him during the research processing. The researcher lacked enough experience and skills during the process of the research. However, the researcher worked hand in hand with the help of the supervisor to get the required information for the whole research process in time. The study was faced with a problem of not finding all respondents in the time of the study due to them being too busy with the organization work. The researcher however made appropriate time table with the top company managers that suited all the respondents during the process of data collection for reliable and valid information.

2. Materials and Methods

2.1 Introduction

This research used methods which include research design that is suitable to the investigation, the target population, the research sample, data collection, and statistical test applied in the study.

2.2 Research Design

Research design is defined by [21] as a plan according to which research participants are selected in order to collect information. The research design tries to answer questions like what kind of study to be done, and what study type will best answer the research question. The study adopted a descriptive research design. A descriptive study was undertaken in order to ascertain and be able to describe the characteristics of the variable of interest in a situation [19]. Descriptive study helped answering the questions regarding the what, where and how.

2.3 Target Population

The target population for this research study was 672 workers who are employed by Grain Bulk Handlers Ltd in all the seven departments in the organization, ie Safety, Security, Weigh Bridge, Control, Bagging, Technical and Canteen department

2.4 Sample and Sampling Technique

2.4.1 Sample size

According to [14] a representative sample size is one that is at least 10% - 20% of the population. The researcher used 15 % of the target population to be the sample population from all the departments. Hence a sample size of 100

2.4.2 Sampling Technique

Proportionate stratified random sampling technique, defined by [19] as a process that involves stratification or segregation, followed by random selection of the subjects from each stratum was adopted for this study. This is because of the heterogeneity of the population and all respondents would have equal opportunity of participation.

Table 3.1: Sampling technique

| Department | Target population | Sample size | Percentage |
|--------------------|-------------------|-------------|------------|
| Control | 102 | 15 | 15 |
| Bagging | 140 | 21 | 15 |
| Security | 110 | 16 | 15 |
| Safety | 80 | 12 | 15 |
| Weighbridge | 107 | 16 | 15 |
| Technical | 90 | 13 | 15 |
| Canteen | 43 | 7 | 15 |
| Total | 672 | 100 | 15 |

Source: Author's own research- Grain Bulk Handlers Limited

2.5 Data Collection Instruments

The study used questionnaires as data collection instruments. The questionnaires were semi-structured; with both close-ended and open-ended questions. Questionnaires were used as they are cheap to administer unlike interviews and often have standardized answers that make it simple to compile data and analysis data.

2.6 Data collection procedure

From Grain Bulk Handlers, respondents were chosen based on how extensively the organization has implemented inventory management as indicated by the number of Warehouses. A sample of 100 respondents comprising of employee who in their daily activities are in constant contact with the suppliers of stock were selected at random from the target population. According to [14] a researcher needs to determine the required sample size for studies.

2.7 Pilot Test

A pilot study was conducted to determine whether potential respondents would have difficulties in understanding or interpreting the questionnaire [2]. 10 conveniently sampled respondents forming 10% of sample from each category were asked to give the needed information for piloting. The pilot tests checked to see if the length of questionnaire was acceptable and uncover any difficulties arising from the procedure and feedback used make necessary adjustments. The pilot study also focused on ensuring that validity and reliability were achieved [5].

2.8 Data Processing and Analysis

Data processing and analysis comprise categorizing, manipulation and summarizing of data in order to obtain answers to research questions [9]. Data preparation was done on completed questionnaires by editing and then coding. The data was entered into the latest version of SPSS (Version 22) ready for analysis.

2.8.1 Descriptive Statistics

Biographical data such as gender, age bracket, and position held by employee and length of service in organization was analyzed using descriptive statistics. Means and standard deviations were used to explore the existing relationships between variables. Findings are presented in figures and or tables.

2.8.2 Inferential Statistics

Regression to assess the relationship between the components of inventory management system as independent variables on organizational performance was done. The regression formula is presented below;

$$Y_s = \beta_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4$$

Where;

Y_s = Inventory management system

β_0 = Constant

X_1 = Inventory control

X_2 = Inventory speed

X_3 = Inventory cost

X_4 = Inventory accountability

The model involved regression between inventory management system and organizational performance and is presented in step analysis, involving regression between inventory management system and organizational performance.

3 Results and Discussion

3.1 Introduction

The research findings are presented on the effects of inventory management system on organization organizational performance in Grain Bulk Handlers Limited. The data analyzed was in line with the set research questions in chapter one.

3.2 Response Rate

The study targeted 100 employees and management in Grain Bulk Handlers Limited in Mombasa who had been in their organization for at least three years. Out of the 100 questionnaires issued for data collection to the respondents 73 (73%) were returned. After cleaning of data 70 (70%) were found valid and used for analysis. According to [14] over 50% response rate is adequate for analysis while over 70% is rated as very good.

3.3 Reliability Analysis

Reliability of an instrument refers to its ability to produce consistent and stable measures. A reliable measurement will consistently assign the same score to the same phenomena. The most common reliability coefficient is the Cronbach's alpha estimates internal consistency based on the average inter - item correlation. The reliability analysis for constructs was as follows: inventory control (.666); inventory speed (.674); inventory cost (.642) inventory accountability (.757) and organizational performance (.670). The overall reliability statistic for all the 34 items based on Cronbach's Alpha was .883 as expressed in Table 4.1.

The reliability is expressed as a coefficient between 0 and 1.00 and the higher the coefficient, the more reliable is the test. In this study the reliability of the instrument based on Cronbach's Alpha of .883 thus suggested that

the 34 items had relatively high internal consistency and thus accepted. A reliability of .70 or higher is considered acceptable in most social science research situations.

Table 4.1: Cronbach's Alpha's Reliability test for Combined variables

| Cronbach's Alpha | Cronbach's Alpha Standardized Items | Based on | N of Item | Comments |
|------------------|--|----------|-----------|-----------------|
| .883 | .886 | | 34 | Accepted |

3.4 Demographic Data

For the researcher to assess the effects of inventory management in Grain Bulk Handlers Limited in Mombasa, it was considered important to first establish the demographic information of respondents such as gender, age bracket, level in organization, period served in the said organization and the size of department. This was considered important as studies have revealed that performance may be influenced by such characteristics. The distribution of the data is presented in tables and figures below.

3.4.1 Gender Distribution of Respondents

In terms of gender, though the respondents were fairly distributed, more males, 40 (55.6%), took part in this study, while females respondents were 30 (44.4%) as indicated in table 4.2 below.

Table 4.2: Gender of respondents

| | | Frequency | Percent | Cumulative Percent |
|-------|--------------|-----------|--------------|--------------------|
| Valid | Male | 40 | 55.6 | 55.6 |
| | Female | 30 | 44.4 | 100.0 |
| | Total | 70 | 100.0 | |

Source: Author's own research – Grain Bulk Handlers Limited

From the findings it can be deduced that despite majority of the respondents being male (55.6%), there is a fair balance of gender in Grain Bulk Handlers LTD in Mombasa County.

3.4.2 Respondents Age Bracket

In the survey, the respondents were asked to state the age category they were in. Out of the 70 respondents 6 (8.3%) of the respondents were between 18-24 years of age, 17 (24.6%) of the respondents were between 25-29

years of age, 15 (21.8%) of the respondents were between 30-34 years of age, 11 (16.3%) of the respondents were between 35-39 years of age, 10 (15%) of the respondents were between 40-44 years of age, and 11 (15%) of the respondents were of 45 years and above . The Table 4.3 illustrates the above results.

Table 4.3: Age bracket of respondents

| | | Frequency | Percent | Cumulative Percent |
|-------|--------------|-----------|--------------|--------------------|
| Valid | 18-24 years | 6 | 8.3 | 8.3 |
| | 25-29 years | 17 | 24.6 | 32.9 |
| | 30-34 years | 15 | 21.8 | 54.8 |
| | 35-39 years | 11 | 16.3 | 71.0 |
| | 40-44 years | 10 | 13.1 | 84.1 |
| | 45 and above | 11 | 15.9 | 100.0 |
| | Total | 70 | 100.0 | |

Source: Author's own research- Grain Bulk Handlers Limited

It can be deduced from the above results that most active work force in Grain Bulk Handlers LTD in Mombasa County lie between the ages of 25 – 39 years accounting for approximately 63% for the category of age group.

3.4.3 Level in the Organization

In the survey, the respondents were asked to state the organizational level category they were in. Out of the targeted 70 of them, 35 (50.4%) of the respondents were in non-management level, 16 (22.2%) of the respondents were in lower management level, 12 (17.9%) of the respondents were in mid-management level, and 7 (9.5%) of the respondents were senior level managers. This result is given in Table 4.4 below

Table 4.4: Level of respondent

| | | Frequency | Percent | Cumulative Percent |
|-------|-------------------|-----------|--------------|--------------------|
| Valid | Non management | 35 | 50.4 | 50.4 |
| | Lower management | 16 | 22.2 | 72.6 |
| | Mid- management | 12 | 17.9 | 90.5 |
| | Senior management | 7 | 9.5 | 100.0 |
| | Total | 70 | 100.0 | |

Source: Author's own research- Grain Bulk Handlers Limited

From the findings majority of the respondents (35) were in non managerial accounting for 50.4% while only 7 (9.5%) were in senior management. This is considered a normal curve as there are usually more employees than management in any given organization.

3.4.4 Organizational Service Duration

In the study, the respondents were asked to state the organizational service duration category they were in. Out of the targeted 70 of them, 23 (32.9%) of the respondents served the organization for a duration of between 5 years or less, 18 (26.2%) of the respondents served the organization for a duration of between 6-10 years, 15 (21.8%) of the respondents served the organization for a duration of between 11-15 years, 6 (7.9%) of the respondents served the organization for a duration of between 16-20 years, 8 (11.1%) of the respondents served the organization for a duration of between 21 years or more. This result is given in table 4.5 below.

Table 4.5: Length of service in organization

| | | Frequency | Percent | Cumulative Percent |
|-------|------------------|-----------|--------------|--------------------|
| Valid | 3 - 5 years | 23 | 32.9 | 32.9 |
| | 6 -10 years | 18 | 26.2 | 59.1 |
| | 11-15 years | 15 | 21.8 | 81.0 |
| | 16 -20 years | 6 | 7.9 | 88.9 |
| | 21 years or more | 8 | 11.1 | 100.0 |
| | Total | 70 | 100.0 | |

Source: Author's own research- Grain Bulk Handlers Limited

It can be inferred from the statistics above that if 59.1% the respondents had been in their organizations for 10 years or less and that only 29.9% over ten years. Then it can be deduced that most employees may change jobs or organizations after the said duration.

3.5 Variables of the study

Means are used to calculate measures of central tendencies in order to determine the typical average value in the distribution. The mean is preferred as it takes into account the precise score of each case thus it incorporates more information than the median which only states a scores relative position. A 5 point likert scale was used to measure the study variables with 5 score for strongly agree and 1 for strongly disagree. The standard deviation on the other hand, was used to measure variation but would elicit a negative or positive signs to show the direction of variation.

3.5.1 Inventory control

The study sought to find out from respondents if inventory control influenced organization performance. Four questions as to whether Grain Bulk Handlers LTD had stringent inventory control measures; the methods were relevant to the type of inventory held, they had an inventory control manager who knew what he was doing, inventory control was being managed strategically. As can be seen from the table, the mean for the four questions on inventory control are (3.87; 4.26; 4.26 and 4.28) respectively. The average mean for inventory control was thus 4.17. This indicate that majority of the respondents agreed that inventory control influenced organizational performance. The findings are given in Table 4.6 below.

Table 4.6: Inventory control

| | N | Mean | Std. Deviation |
|---|----|------|----------------|
| Grain Bulk Handlers LTD has the most stringent inventory control measures | 70 | 3.87 | 1.153 |
| The measures are relevant to the type of inventory held in Grain Bulk | 70 | 4.26 | .889 |
| There is a competent inventory control manager | 70 | 4.26 | .814 |
| Inventory is managed strategically in Grain Bulk Handlers LTD | 70 | 4.28 | 3.305 |

Source: Author's own research- Grain Bulk Handlers Limited

3.5.2 Inventory speed

The study sought to find out from respondents in Grain Bulk if inventory speed influenced their organizational performance. Specifically the study sought to establish whether rate of inventory turnover was high, incoming inventory was calculated to the most economical levels, strategies were employed to vary the speed of inventory, strategies employed to monitor inventory speed were excellent.

The means were (4.26; 4.35; 4.29 and 4.24) respectively. The average for the four being 4.29. This indicates that most employees in Grain Bulk Handlers LTD agreed that inventory speed influenced the performance of their organization. The findings are presented in table 4.7.

3.5.3 Inventory cost

The study sought to find out from employees in Grain Bulk Handlers LTD if inventory cost influenced organizational performance. From the findings in table 4.8 below, inventory running cost are relatively low, strategies are set to ensure low inventory running cost, strategies set are relevant to the then inventory and the strategies set are efficient in cost cutting. The mean were (3.96; 4.17; 3.97 and 4.02) respectively. Mean for inventory cost was 4.03

Table 4.7: Inventory speed

| | N | Mean | Std. Deviation |
|--|----|------|----------------|
| The rate of inventory turnover in Grain Bulk Handlers LTD is high | 70 | 4.26 | .627 |
| Incoming inventories at Grain Bulk Handlers LTD are calculated to the most economical levels | 70 | 4.35 | .641 |
| Strategies are employed to vary inventory speed | 70 | 4.29 | .746 |
| Strategies employed to vary inventory speed are very efficient | 70 | 4.24 | .726 |

Source: Author's own research- Grain Bulk Handlers Limited

3.5.4 Inventory accountability

The employees were asked whether inventory accountability influenced organizational performance. Specifically they were to answer as to whether there were verification documents in receiving and issuing of inventory, declaration of inventory was done effectively, verification documents were filled well for future reference and counter checking was done at entry and exits of Grain Bulk Handlers LTD by security. The average mean is 3.88. The study findings are presented in the table 4.9 below.

3.5.5 Inventory management system and organizational performance

Organizational performance as the dependent variable was regressed on attributes of inventory management system; inventory control, inventory speed, inventory cost and inventory accountability. Results of the findings are presented in tables 4.10 - 4.11.

Table 4.8: Inventory cost

| | N | Mean | Std. Deviation |
|--|----------|-------------|-----------------------|
| Inventory running cost is relatively low in Grain Bulk Handlers LTD | 70 | 3.96 | .848 |
| There are strategies set in Grain Bulk Handlers LTD to ensure low inventory running cost | 70 | 4.17 | .748 |
| Strategies set are relevant to the then inventory | 70 | 3.97 | .944 |
| The strategies set are effective and efficient in cutting cost of running inventory management | 70 | 4.02 | .811 |

Source: Author's own research-Grain Bulk Handlers Limited

This findings indicate that majority of the respondents agreed that inventory cost influenced organizational performance.

Table 4.9 Inventory accountability

| | N | Mean | Std. Deviation |
|---|----------|-------------|-----------------------|
| There are verification document in receiving and issuing of inventory | 70 | 3.43 | 1.233 |
| Declaration of inventory is done effectively | 70 | 3.77 | .858 |
| Verification documents are filled well for future reference | 70 | 4.00 | .694 |
| Counter checking is done at entry and exit of Grain Bulk Handlers LTD | 70 | 4.31 | .593 |

Source: Author's own research- Grain Bulk Handlers Limited

Table 4.10: Model summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .510 ^a | .262 | .249 | .397 |

The model summary table shows R (.510), showing a strong and positive relationship between inventory management system and organizational performance. R^2 is .262, showing that only 26% of variance is predicted by inventory management system.

Table 4.11: ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1 | Regression | 13.659 | 4 | 3.415 | 21.775 | .000 ^b |
| | Residual | 38.735 | 247 | .157 | | |
| | Total | 52.394 | 251 | | | |

a. Dependent Variable: OP

b. Predictors: (Constant), IC, IS, IC, IA

Although only a small amount of variance in organizational performance is explained by inventory management system, the above table 4.12 shows a strong relationship as R is significant, $F = 21.775$, $p = .000$.

The regression coefficients results with predictors as inventory control, inventory speed, inventory cost and inventory accountability is shown in table 4.12.

The Beta values for each is of the independent variables are inventory control -.037; inventory speed .285; inventory cost .206 and inventory accountability .169 respectively. This indicates that there is a positive relationship between inventory management system and organizational performance in three of the leader attributes, only inventory control shows negative relationship. Three variables are however highly significant with inventory speed, inventory cost and inventory accountability being highly significant as $p \leq 0.5$. The significance for inventory control at .544 however shows no significance for organizational performance. The condition for mediation was thus met with inventory management system being significantly related to organizational performance ($p = .000$).

Table 4.12: Regression coefficients

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|-------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2.055 | .243 | | 8.475 | .000 |
| | IC | -.015 | .025 | -.037 | -.607 | .544 |
| | IS | .263 | .060 | .285 | 4.366 | .000 |
| | IC | .156 | .049 | .206 | 3.189 | .002 |
| | IA | .139 | .055 | .169 | 2.532 | .012 |

3.6 Discussion

The response rate of 69.2% was considered adequate for analysis and the reliability of instrument using Cronbach's alpha was high at .883, which was above the normally accepted .70 for social sciences.

From the findings of descriptive analyses presented, employees perception of inventory management system mean was ($M = 4.18$) showing employees in Grain Bulk Handlers LTD acknowledged inventory management system attributes in their organizational performance. They agreed that their organization displayed all the four inventory management system attributes of inventory control, inventory speed, inventory cost and inventory accountability. The highest values belong to inventory speed ($M = 4.26$); On the contrary, inventory control had the highest standard deviation ($SD = 7.61$).

The regression analysis of the inventory management system variables; inventory control, inventory speed, inventory cost, inventory accountability as the independent variables on one end and organizational performance revealed $R = .510$, $R^2 = .262$. These findings reveal that there is a strong positive relationship between inventory management system and organizational performance. This finding is in agreement with the findings of [3] who argue that inventory management system contributes to organizational performance and improvement. The relationship was confirmed highly significant as $F = 21.78$, $P = .000$.

Three out of the four of the attributes of inventory management system; inventory cost (.206); inventory accountability (.169) and inventory speed (.285) were found to be positively related and significant for organizational performance. The relationship was however was moderate as revealed from the statistics. The fourth variable inventory control (-.037) was found to be negatively related to organizational performance. These findings indicate that inventory speed, inventory cost and inventory accountability lead to a moderate increase in organizational performance. The findings further support the earlier descriptive analyses.

4. Conclusion

The study tested the research framework with key variables as inventory management system and organizational performance. Findings indicate that the organization attests to its inventory management system, with majority agreeing that their organization displayed the four inventory management system attributes of inventory control, inventory speed, inventory cost, and inventory accountability. The study also reveals a strong and positive relationship between inventory management system and organizational performance with three variables; inventory speed, inventory cost and inventory accountability being strongly and positively related to organizational performance.

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